INTERMEZZO 3.5c
Powered Center Channel
Service Manual

Infinity Systems, Inc

250 Crossways Park Dr.

Woodbury, New York 11797

REV **4** **7/2004**

CONTENTS

SPECIFICATIONS ……3
DETAILED SPECIFICATIONS ……4
CONTROLS and CONNECTIONS ……6
TEST SET UP AND PROCEDURE ……8
SERVICE BULLETIN INF2002-3……9
TECH TIP INF2003-03……10
IM 3.5c ADJUST BIAS PROCEDURE……11
EXPLODED VIEW of INTERMEZZO 3.5c ……12
EXPLODED VIEW of AMPLIFIER ……13
PACKAGING ……14
WIRING DIAGRAM/PASSIVE CROSSOVER NETWORK ……15
ELECTRICAL PARTS LIST ……16
INTEGRATED CIRCUIT DIAGRAMS ……21
PRINTED CIRCUIT BOARD DIAGRAMS……22
SCHEMATICS ……26

Specifications

Frequency Response:	80Hz - 20kHz (±1.5dB) 60Hz - 22kHz (±3dB)
Recommended Amplifier Power Range	25-150 watts*
Internal Amplifier Power	250 watts RMS (with 0.1% THD @ 100Hz)
2nd- and 3rd-Order Harmonic Distortion	<1% (80Hz - 20kHz@95dB SPL)
Sensitivity:	90dB (2.83V @ 1 meter)
Nominal Impedance:	8Ω
Crossover Frequencies:	350Hz; 2800Hz - 24dB/octave
Mid-Bass Transducer:	Dual 5-1/4” (133mm) cone - C.M.M.D., magnetically shielded, neodymimum magnets, 7.7 ohms, DCR±10%
Midrange Transducer:	3-1/2” (89mm) cone - C.M.M.D., magnetically shielded, neodymimum magnets, 4.8 ohms, DCR±10%
High-Frequency Transducer:	1” (25mm) dome magnetically shielded - C.M.M.D., neodymimum magnets, 3.5 ohms, DCR±10%
Dimensions (H x W x D):	8-3/4" x 22" x 8" (22.2cm x 55.9cm x 320.3cm)
Weight:	27 lb (12.3kg) Each

* The maximum recommended amplifier power rating will ensure proper system headroom to allow for occasional peaks. We do not recommend sustained operation at these maximum power levels.

Detailed Specifications

Infinity Intermezzo 3.5c center channel 250w Powered Mid-Bass/ Modular Amp

LINE VOLTAGE		Hi/Lo V	Nom.	Unit	Notes
US 120vac/60Hz		108-132	120	Vrms	Normal operation, MOMS required
EU 230vac/50-60Hz		207-264	230	Vrms	Normal operation, MOMS required

Parameter	Specification	Unit	QA Test Limits	Conditions	Notes
Amp Section					
Type (Class AB, D, other)	AB	--	--	HC-BASH Power Supply	
Load Impedance (speaker)	3	Ohms	--	Nominal	Z-curve required
Rated Output Power	250	Watts	250	1 input driven	
THD@ Rated Power	0.1	%	0.8	22k filter	P=250w
THD @ 1 Watt	0.3	%	1	22k filter	
Polarity	0	deg.	0˚ ±20	In phase at 100Hz	.250 faston (+).....205 faston (-)
DC Offset	10	mV-DC	20	@ Speaker Outputs	
Damping factor	>50	DF	--		
Input Sensitivity					
Input Frequency	100	Hz	100	Nominal Freq.	1 input driven
Line Input	N/A	mVrms	±2dB	To Rated Power	1 input driven
Speaker/Hi Level Input	6	Vrms	±2dB	To Rated Power	(-20dB below Line In)...1 input driven
Signal to Noise					
SNR-A-Weighted	100	dBA	90	relative to rated power	A-Weighting filter
SNR-unweighted	70	dBr	70	relative to rated power	22k filter
SNR rel. 1W-unweighted	60	dBr	55	relative to 1W Output	22k filter
Residual Noise Floor	2	mVrms	3	Volume @max, using RMS reading DMM/VOM (or A/P)	
Residual Noise Floor	1.5	mVrms(max)	2	Volume @max, w/ A/P Swept BP Meas.(Line freq.+ harmonics)	
Input Impedance					
Line Input	50k	ohms	N/A	Nominal	
Speaker/Hi Level Input	N/A	ohms	N/A	N/A	
Active Filters					
Low Pass (fixed or variable)	fixed				
Low Pass filter (point or range)	5k	Hz	±2dB		
Slope	24	dB/Octave	--		
Q	0.707	Damping	--		
Hi Pass/Subsonic filter	fixed	Hz	±2dB		
High Pass filter (point or range)	80	Hz	±2dB		
Slope	12	dB/Octave	--		
Q	0.707	Damping	--		
TV Size EQ (Small, Large, None)					
Slide Switch (3 position)	yes				Shelving EQ use w/ different TVs or None at all
HPF Shelving EQ/ Small TV	150	Hz			
Level	-3	dB			
HPF Shelving EQ/ Large TV	250	Hz			
Level	-3	dB			
HPF Shelving EQ/ None	400	Hz			
Level	-3	dB			
Notch Filter					
Frequency	500	Hz			
Notch Filter Level	0	dB			
Notch Filter Width(Q)	0	Q			
Limiter (yes/no)	Yes				
Features	--				
LED Bypass Switch (yes/no)	yes	--		Note: ATO remains functional	Turns off LED indicator on the front panel
Hi Pass Filter Bypass Switch	yes	--	functional		push-button type
Variable Bass Level Control	yes	--	functional		
Bass Shelving EQ: pot Taper (lin/log)	lin	--	functional		
Bass Shelving EQ: Frequency	100	Hz	--		
Bass Shelving EQ: Boost/Cut	±6	dB	±2dB		
Signal Sensing (ATO)					
Auto-Turn-On (yes/no)	yes	--	functional		Bi-Color LED indicator to light-up Bass Level Control
ATO Input Frequency	1k	Hz	functional		
ATO Level	40	mV	functional	Input	

00285-1

Detailed Specifications (Cont.)

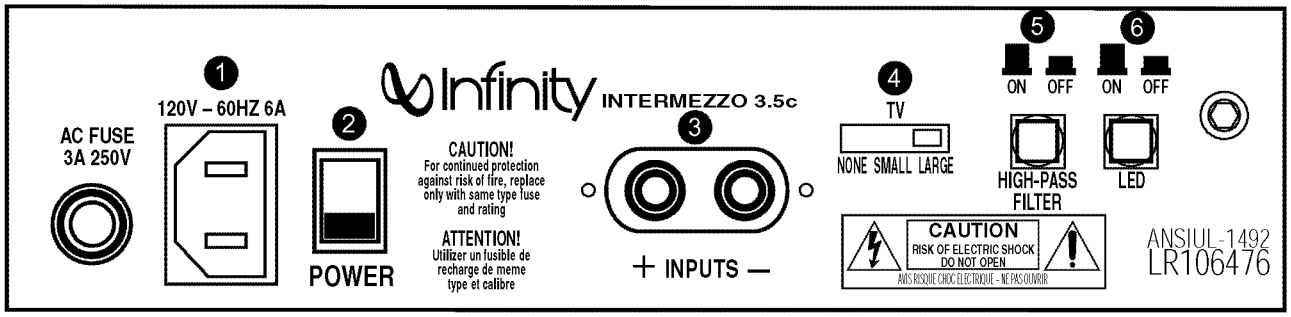
Parameter	Specification	Unit	QA Test Limits	Conditions	Notes
ATO Bandwidth	5k	Hz	functional	ATO-LPF for noise immunity	
ATO Turn-on time	5	ms	functional	Amp connected and AC on, then input signal applied	
Auto Mute/ Turn-OFF Time	15	minutes	functional	T before muting, after signal is removed	
Power on Delay time	3	sec.	4	AC Power Applied	
Transients/Pops					
ATO Transient	10	mV-peak	N/A	@ Speaker Outputs	
Turn-on Transient	100	mV-peak	1v-pp	@ Speaker Outputs	AC Line cycled from OFF to ON
Turn-off Transient	100	mV-peak	1v-pp	@ Speaker Outputs	AC Line cycled from ON to OFF
Efficiency					
Stand-by Input Power	10	Watts	15	@ nom. line voltage	
AC Power Cons.@1W	N/A	Watts	N/A	@ nom. line voltage	
Power Cons.@rated power	312	Watts	N/A	@ nom. line voltage	
Efficiency	80%	%	70	@ nom. line voltage	
Protection					
Short Circuit Protection	yes		functional	Direct short at output	
Thermal Protection	yes			@1/8 max unclipped Power	
DC Offset Protection	yes			DC present at Speaker Out leads	Relay or crowbar (for driver/fire protection)
Line Fuse Rating	3	Amps		Type-T or Slo Blo	External fuse with UL/SEMKO rated holder

00285-2

Controls and Connections

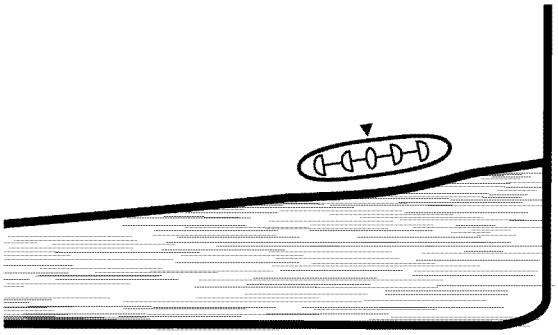
Controls and Connections

Rear Panel



1. AC-Cord Input
2. Power Switch
3. Speaker Input
4. TV Size Selector
5. High-Pass-Filter Selector
6. LED Selector

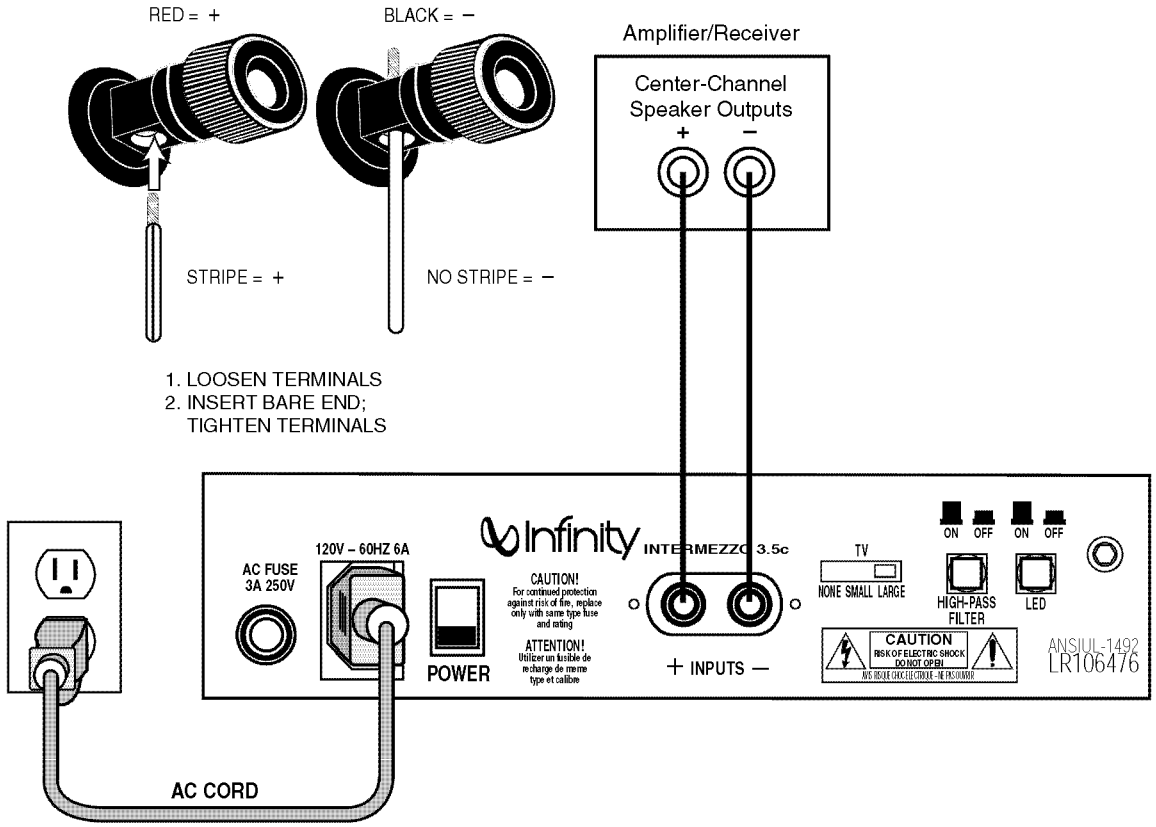
Front Panel



7. Woofer Level Control

Controls and Connections (Cont.)

Speaker Connections ❸



TV Size Selector ❹

This control optimizes the performance of the Intermezzo 3.5c based on the size of the TV on which it is placed.

If you are placing the Intermezzo 3.5c behind a perforated screen for a projection TV, set this switch to "None."

If you are placing the Intermezzo 3.5c on top of a TV with a diagonal screen size up to about 36," set this switch to "Small."

If you are placing the Intermezzo 3.5c on top of a TV with a diagonal screen size larger than 36," set this switch to "Large."

High-Pass Filter ❺

When set to "On," this control limits the low frequencies that the Intermezzo 3.5c will reproduce and allows you to use your processor's/receiver's bass-management settings for an ideal blend with a subwoofer.

When set to "Off," the Intermezzo 3.5c will reproduce the entire frequency range. Use this setting only if your system does not include a subwoofer.

LED Selector ❻

This switch determines whether the green power indicator on the woofer level control ❼ will illuminate when the speaker is playing. The setting of this switch does not affect the performance of the speaker in any way.

Setting the Woofer Level Control ❼

1. Set the processor's/receiver's center-channel-speaker setting to "Small."

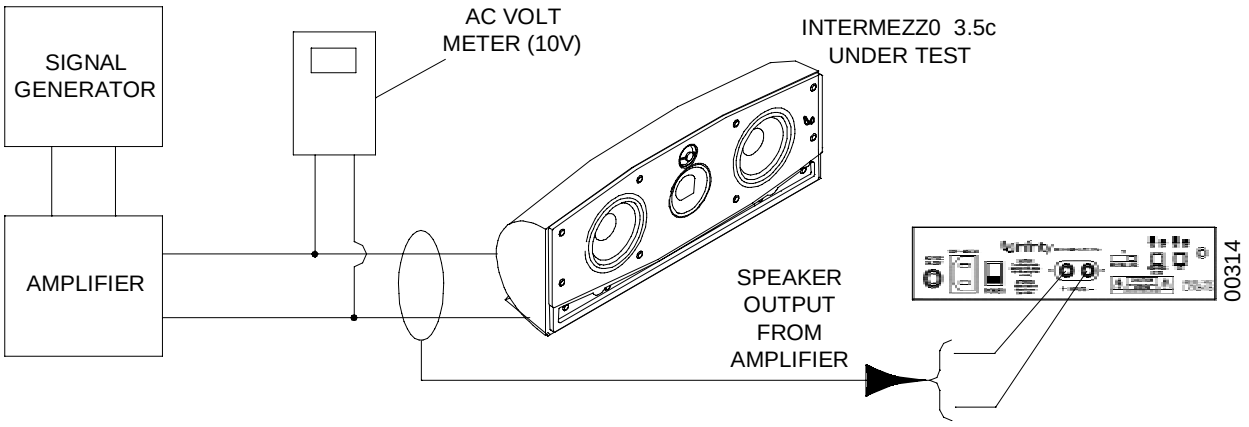
2. Confirm correct setting of Set TV Size selector ❹.

3. Using the test tones in your receiver/processor, adjust the center-channel-speaker output (on the processor) to match the left and right speakers.

4. Finally, fine-tune the level adjustment on the Intermezzo 3.5c ❼ to most closely match the tonal balance of the main left and right speakers. (For the Intermezzo 4.1t, initially set the center-channel level to "5" For the Intermezzo 2.6, set to the same setting as the Intermezzo 2.6's woofer adjustment.)

00284-2

Test Set Up and Procedure



SYSTEM AURAL SWEEP TEST
Equipment needed:

Function/signal generator/sweep generator
Integrated Amplifier
Multimeter
Speaker cables

General Unit Function (UUT = Unit Under Test)

1. Remove the loudspeaker grille.
2. Depress the "High-Pass Filter" button on the rear faceplate; switch the TV control to None.
3. Connect one pair of speaker cables to the input terminals on UUT. Cables should be connected to an integrated amplifier fed by the signal generator.
4. Turn on signal generator and adjust so that *speaker level output at the amplifier* is **7.0V, 80 Hz**.
5. Plug in AC power cord and turn on UUT with the power switch; LED on the Level control should light - Red initially and Green after step #6 is followed.
6. Turn up the level control on the front of the UUT to "10". (Maximum). Woofers should be driving close to maximum excursion at this point.

Sweep Function

1. Follow steps 1-6 above, using a sweep generator as a signal source.
2. Sweep generator from 20Hz to 300Hz. Listen to the cabinet and drivers for any rattles, clicks, buzzes or any other noises. If any unusual noises are heard, remove woofers and test.

Driver Function

1. Remove woofers from cabinet; (See Page 9), detach + and - wire clips.
2. Check DC resistance of woofer; each driver should be **7.7 ohms** ±10%
3. Connect a pair of speaker cables to driver terminals. Cables should be connected to an integrated amplifier fed by a signal generator. Turn on generator and adjust so that speaker level output is **5.0V**.
4. Sweep generator from 20Hz to 1kHz. Listen to driver for any rubbing, buzzing, or other unusual noises.

Service Bulletin

Service Bulletin INF2002-03 - February 2002 | Warranty labor rate: MINOR repair

To: All Infinity Service Centers

Model: Intermezzo 3.5c

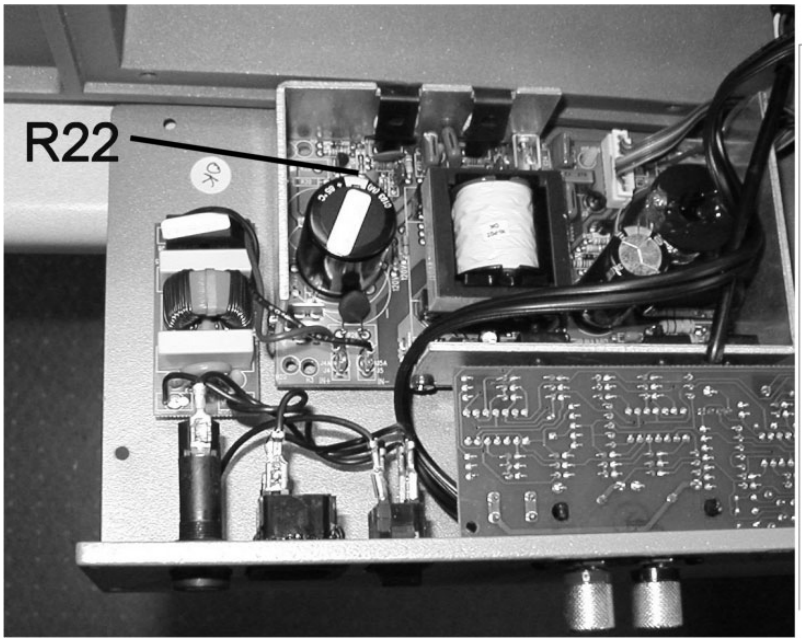
Subject: No Output

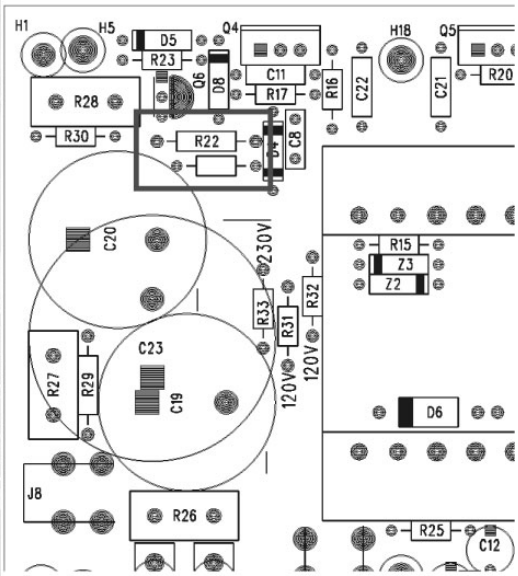
In the event you receive an Intermezzo 3.5c center channel loudspeaker with the complaint: "There is no output, and the LED on the volume control does not light, red or green", check the items listed below:

Check the 3A line fuse to make sure it's not open. If open, replace with a 3A MDL (.25 x 1.25) slo-blo fuse, Infinity part# 80126.

Locate R22 in the power supply section, as shown below.
If value of R22 is not 100k ohms ±5%, then replace R22 with a 1/2 Watt 100k ohm ±5%, resistor.

1. Remove the grille. Lay the loudspeaker on its face on a padded surface, amplifier facing upwards.
2. Remove the black metal bottom cover, (10) Phillips screws; remove the (6) Phillips screws on the amplifier faceplate.
3. Lift the amplifier out of the enclosure cavity; detach connectors when necessary for access.
4. Locate the power supply section and R22 from the illustrations below. R22 can be checked in-circuit and should be 100k ohms ±5%. If it is any other value, or open, replace with Infinity part# RC0082.
5. Replace the amplifier, bottom cover, and test the loudspeaker.





TECH TIPS

Troubleshooting tips and solutions to common service problems

For models: IL50, IL100s, MSW-1, IL60, IL120s, IM2.6, IM3.5c **TIP# INFTT2003-03**

Intermezzo, Interlude and Modulus MSW-1 Power Supply Repair

Recommended for instances where the PCB has been damaged, for the above models only:

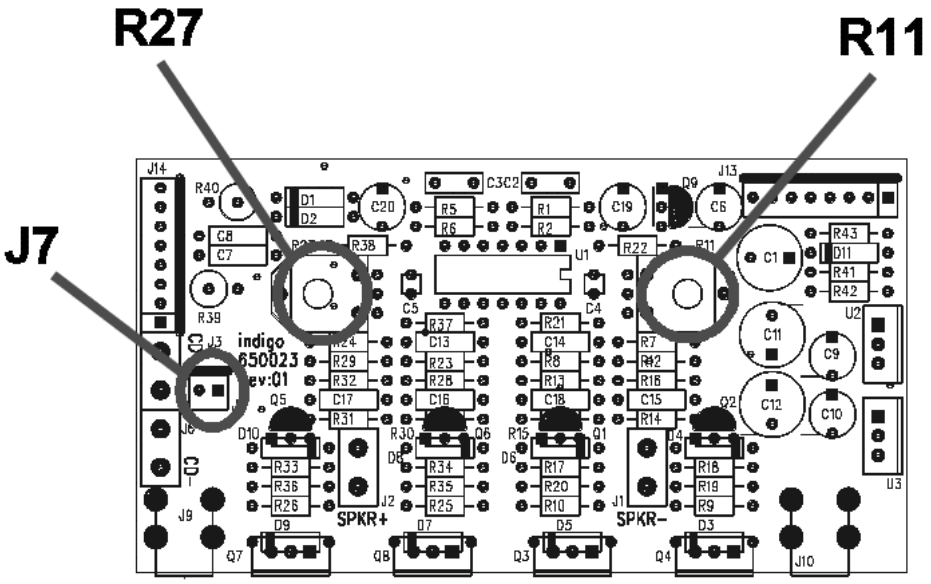
1) Change all MOSFETS, even for one device failure.
2) Clean and repair the PC board if required (See Tech Tip HCG2002-01 - Damaged Printed Circuit Boards).
3) Replace the Hybrid Bash Controller IC:
   U1 in models: IL50,IL100s,MSW-1,IM2.6,IM3.5c
   U501 in models: IL60, IL120s
   Infinity part **# HC1011**

FAILURE TO FOLLOW THE INSTRUCTIONS ABOVE MAY RESULT IN UNIT FAILURE WHEN THE AMPLIFIER IS POWERED UP

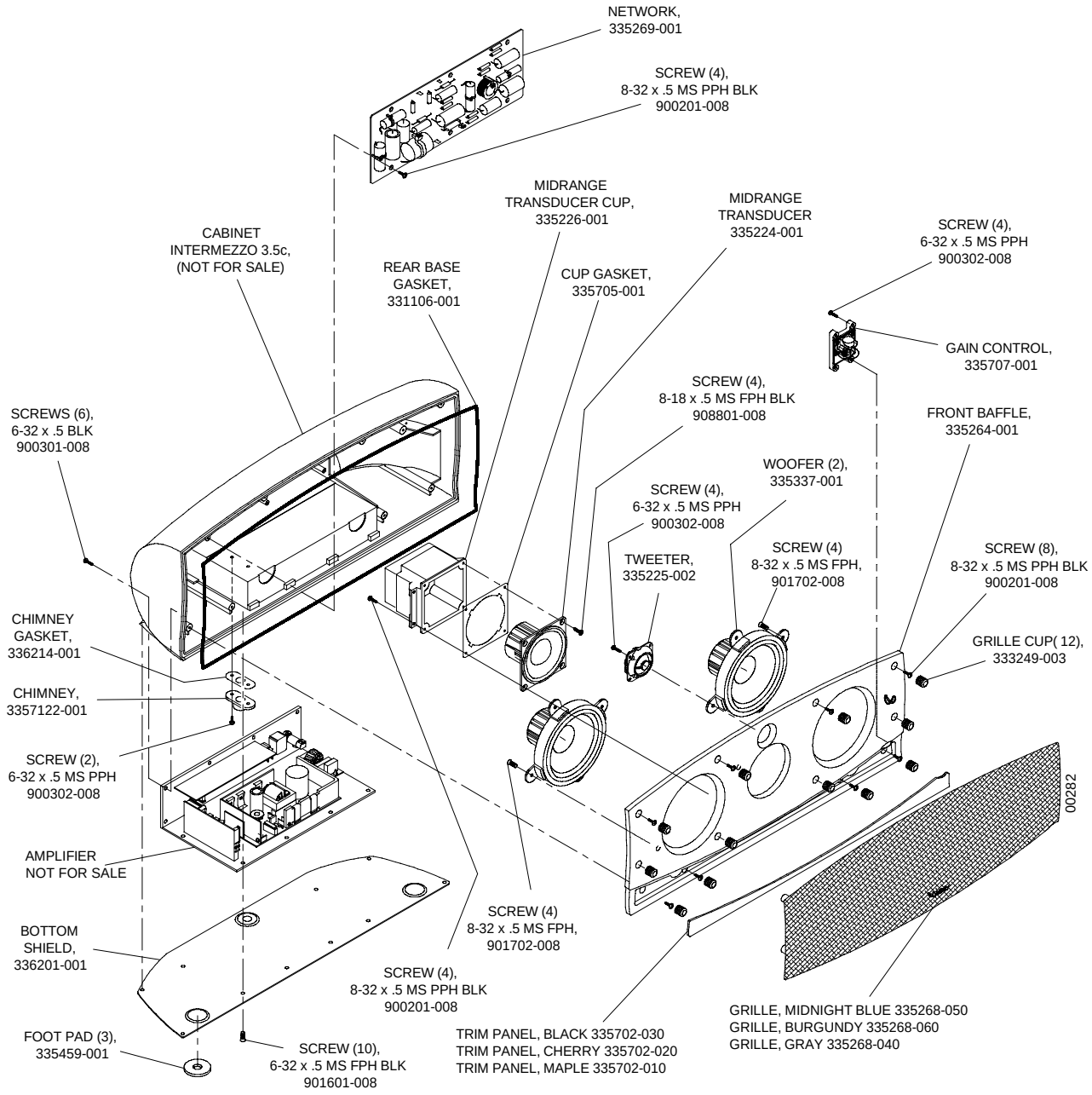
IM 3.5c ADJUST BIAS PROCEDURE

(Mandatory when any output MOSFET transistors Q3,4,7,8 are replaced)

1. Amplifier should be unplugged and OFF.
2. Remove Amp assembly from cabinet, following the instructions on Page 9. All wires can remain connected unless they will prevent you from removing the amplifier or accessing potentiometers on the Linear board PCB in the following steps.
3. Locate the Linear board assembly (PCB with the output transistors)
4. Adjust R11 and R27 fully Counter Clockwise. See diagram below.
5. Apply 120 VAC power to unit, Turn power switch ON.
6. Verify LED illuminates on the front gain control dial unless you have disconnected the plug.
7. Remove shorting plug on terminal J7 on Linear board, and insert current meter, set to the low mA range.
8. Verify initial current is less then 1 mA.
9. Adjust R11 Clockwise until current meter reads **5 mA** + the initial current from step #8.
10. Adjust R27 Clockwise until current meter now reads **10 mA** + the initial current from step #8.
11. Turn amplifier OFF. Disconnect AC power to unit.
12. Remove current meter; insert shorting plug back in terminal J7.
13. Replace cover (if present), wires if disconnected, and replace amplifier back into cabinet.



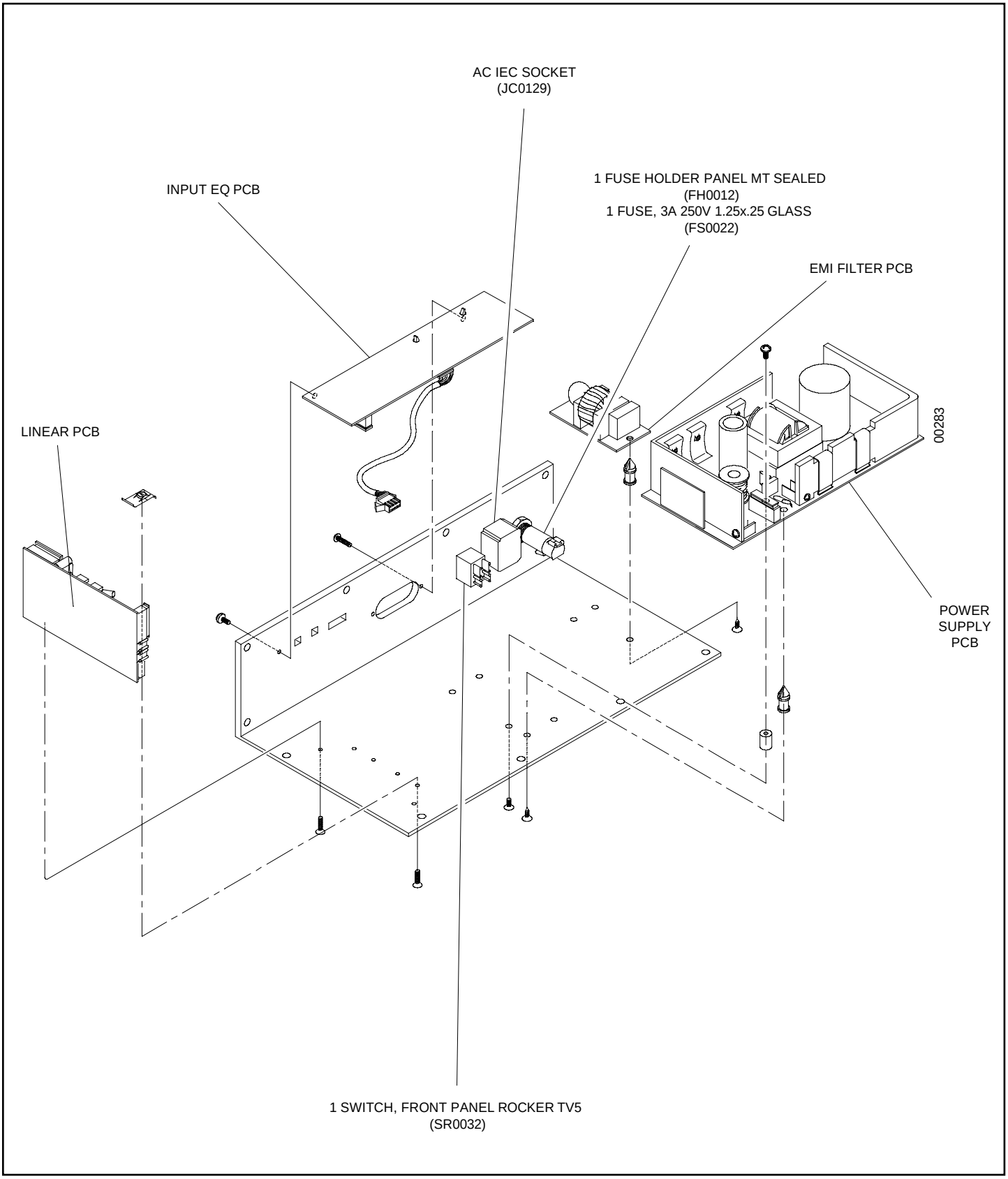
Exploded View of Intermezzo 3.5c


NETWORK, 335269-001
SCREW (4), 8-32 x .5 MS PPH BLK 900201-008
MIDRANGE TRANSDUCER CUP, 335226-001
MIDRANGE TRANSDUCER 335224-001
SCREW (4), 6-32 x .5 MS PPH 900302-008
CABINET INTERMEZZO 3.5c, (NOT FOR SALE)
REAR BASE GASKET, 331106-001
CUP GASKET, 335705-001
GAIN CONTROL, 335707-001
SCREW (4), 8-18 x .5 MS FPH BLK 908801-008
SCREWS (6), 6-32 x .5 BLK 900301-008
FRONT BAFFLE, 335264-001
WOOFER (2), 335337-001
SCREW (4), 6-32 x .5 MS PPH 900302-008
TWEETER, 335225-002
SCREW (4) 8-32 x .5 MS FPH, 901702-008
SCREW (8), 8-32 x .5 MS PPH BLK 900201-008
CHIMNEY GASKET, 336214-001
GRILLE CUP(12), 333249-003
CHIMNEY, 3357122-001
SCREW (2), 6-32 x .5 MS PPH 900302-008
00282
AMPLIFIER NOT FOR SALE
BOTTOM SHIELD, 336201-001
SCREW (4) 8-32 x .5 MS FPH, 901702-008
SCREW (4), 8-32 x .5 MS PPH BLK 900201-008
GRILLE, MIDNIGHT BLUE 335268-050
GRILLE, BURGUNDY 335268-060
GRILLE, GRAY 335268-040
FOOT PAD (3), 335459-001
SCREW (10), 6-32 x .5 MS FPH BLK 901601-008
TRIM PANEL, BLACK 335702-030
TRIM PANEL, CHERRY 335702-020
TRIM PANEL, MAPLE 335702-010

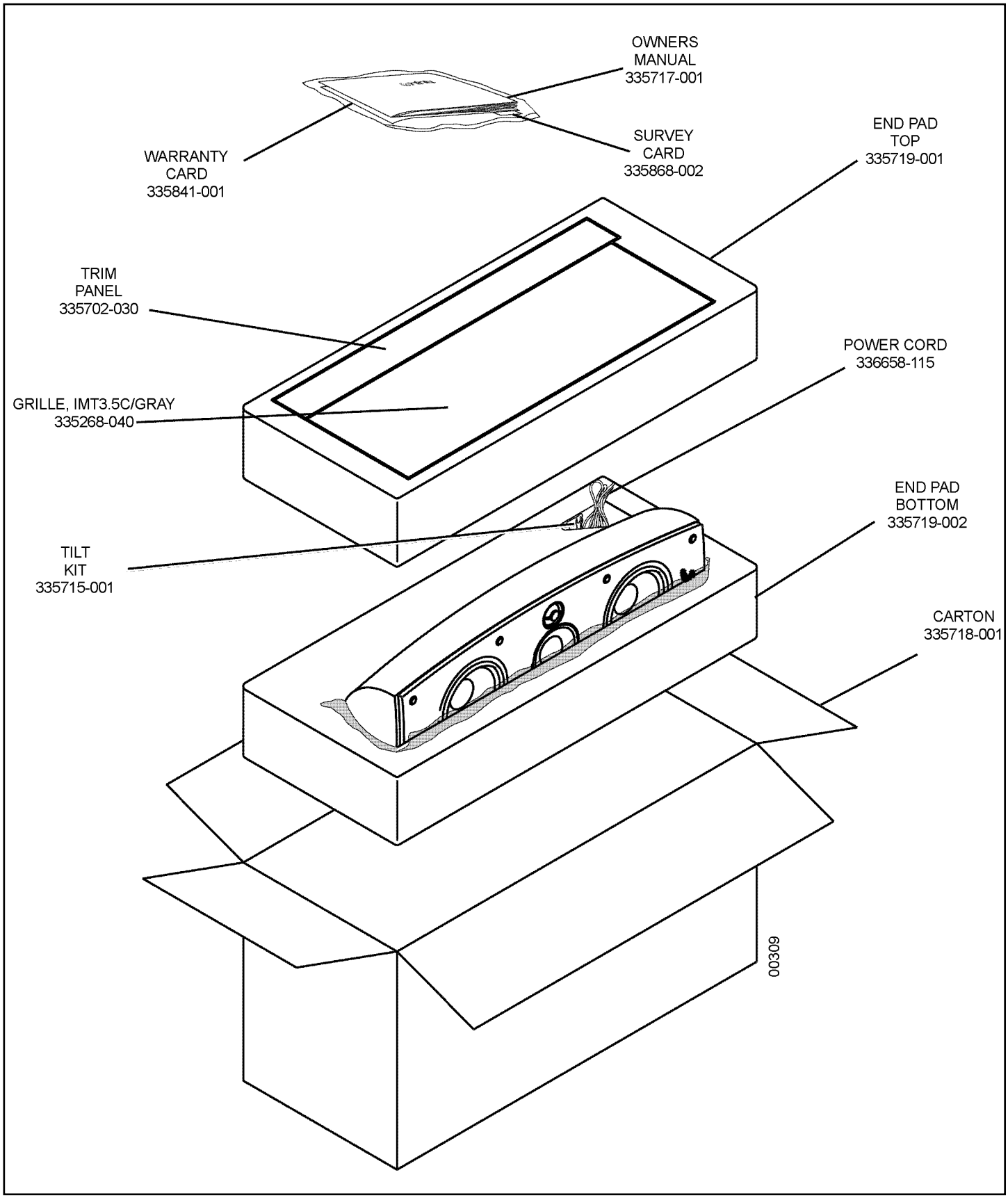
TO SERVICE THE INTERMEZZO 3.5c

1. Remove the grille.
2. Remove the bottom trim panel; remove (8) rubber grille retainers (four under the trim panel and four at the top of the loudspeaker ONLY); this can be accomplished by carefully pulling them out of their cavities with long-nosed pliers or similar tool.
3. Remove the (8) Phillips screws that are now exposed.
4. Carefully lift the front baffle, with tweeter, midrange, and woofers attached, off the cabinet.
5. If necessary, remove all of the Phillips screws holding the woofers or the tweeter to the baffle. To service the midrange,four screws to the plastic cup must be removed first to expose the driver.

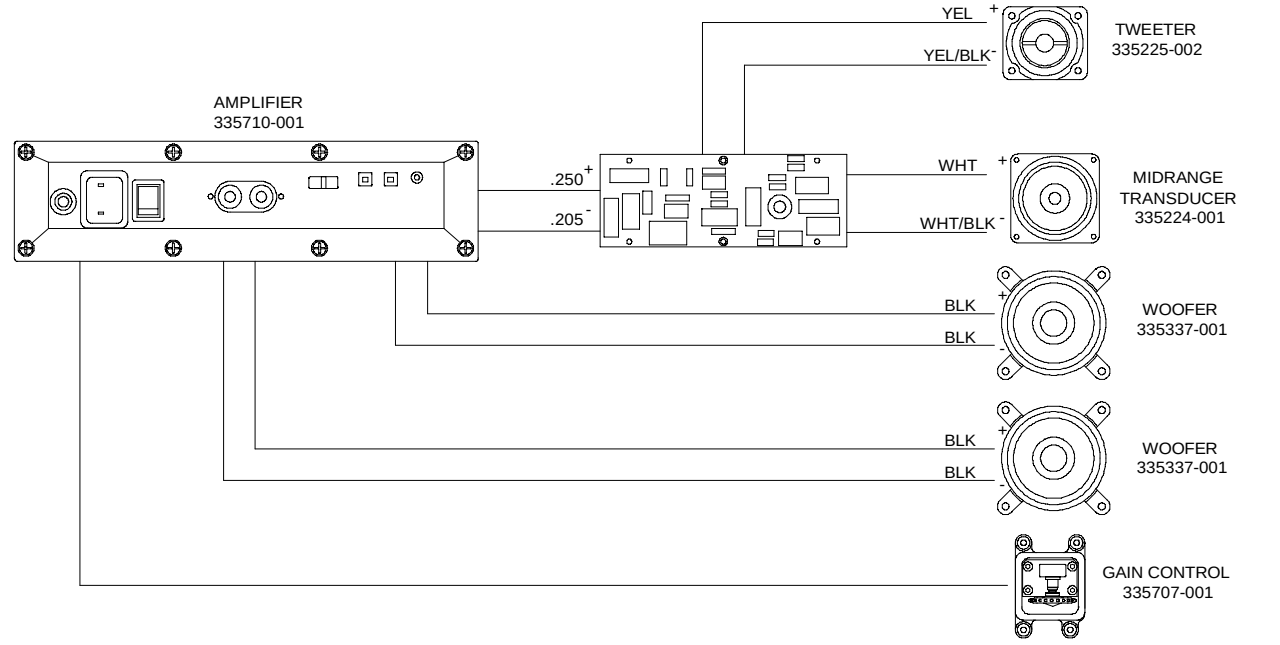
Exploded View of Amplifier

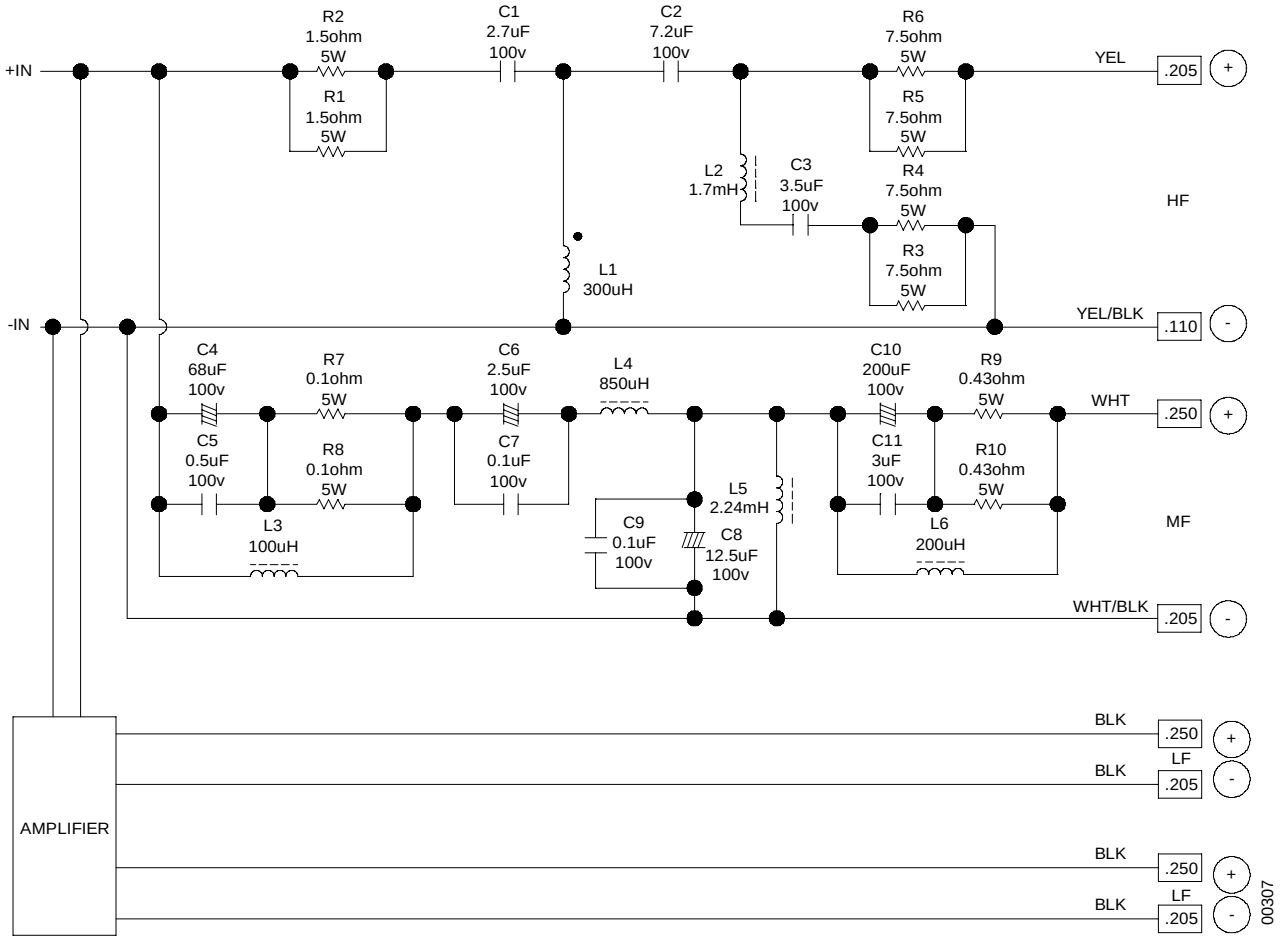


Packaging


OWNERS
MANUAL
335717-001
WARRANTY
CARD
335841-001
SURVEY
CARD
335868-002
END PAD
TOP
335719-001
TRIM
PANEL
335702-030
POWER CORD
336658-115
GRILLE, IMT3.5C/GRAY
335268-040
END PAD
BOTTOM
335719-002
TILT
KIT
335715-001
CARTON
335718-001
00309

Wiring Diagram/Passive Crossover Schematic





Electrical Parts List

Part No.	Ref Designator	Qty	Description
	PCB, LINEAR BD		
	Capactors		
CC0025	C15,C16,C17,C18	4	CAP, CA 1000PF 100V 10%
CC0080	C13,C14	2	CAP, CA 220P 100V 10%
CC0082	C7,C8	2	CAP, CA .1UF 50V 20%
CC0097	C4,C5	2	CAP, C 10P 50V 10
CE0003	C6	1	CAP, E 2.2UF 50V 20% 105C
CE0013	C9,C10	2	CAP, E 47UF 50V 20% 5MMLS
CE0018	C11,C12	2	CAP, E 100UF 25V 20% 5MMLS
CE0106	C19,C20	2	CAP, E 22UF 35V BP 8X11 5MMLS
CE0116	C1	1	CAP, E 2.2UF 50V BP 6X11 5MMLS
CF0092	C2,C3	2	CAP, F 1000PF 100V 5% 5MMLS
	Semiconductors		
DS0001	D1,D2,D3,D4,D5,D6,D7,D8,D9,D10,D11	11	RECT, 100mA 75V SIGNAL 1N4148T
UA0009	U1	1	OPAMP, QUAD 14P DIL TL074/084
UV0010	U2	1	VREG, +15V 500MA LM7815CT
UV0011	U3	1	VREG, -15V 500MA LM7915CT
QB0017	Q2,Q6	2	TRANS, NPN 150V 0.6A 2N5551TR
QB0018	Q1,Q5	2	TRANS, PNP 150V 0.6A 2N5401TR
QM0034	Q4,Q8	2	MOSFET, IRF9540 TO220AB
QM0036	Q3,Q7	2	MOSFET, IRF530 TO220
QM0054	Q9	1	JFET, N-CH J113 TO92
	Resistors		
RC0273	R19,R20,R35,R36	4	RES, ZERO OHM 1/4W
RM0001	R12,R13,R14,R15,R28,R29,R30,R31	8	RES, MF 1K00 1/4W 1%
RM0002	R1,R2,R5,R6,R22,R38,R41,R42	8	RES, MF 10K0 1/4W 1%
RM0021	R7,R8,R23,R24	4	RES, MF 1K82 1/4W 1%
RM0024	R17,R18,R33,R34	4	RES, MF 2K21 1/4W 1%
RM0027	R21,R37	2	RES, MF 33K2 1/4W 1%
RM0029	R9,R10,R25,R26	4	RES, MF 3K01 1/4W 1%
RM0144	R43	1	RES, MF 47K5 1/4W 1%
RM0180	R16,R32	2	RES, MF 4K99 1/4W 1%
RP0059	R11,R27	2	POT, 2K 8MM TOP ADJ/COVER
RX0048	R39,R40	2	RES, MO 330R 1W 5%
	Miscellaneous		
JH0016	J7	1	CNCTR, HEADER 2PIN .100CTR
JH0074	J13,J14	2	CNCTR, HEADER 8PIN LOCKING .1C
MM0025	J9,J10	2	MISC, PC MT SCREW TERM 6-32
MT0003	J1	1	TERM, FASTON MALE PCMT 250X032
MT0023	J3,J6	2	TERM, FASTON MALE PCMT 187X032
MT0036	J2	1	TERM, FASTON MALE PCMT 205X032
	PCB, INPUT EQ		
	Capacitors		
CC0020	C200	1	CAP, CA 470PF 100V 5%
CC0025	C203	1	CAP, CA 1000PF 100V 10%
CC0072	C1,C2,C3,C100,C101	5	CAP, CA 100PF 100V 10%

Electrical Parts List (Cont.)

Part No.	Ref Designator	Qty	Description
CC0082	C201	1	CAP, CA .1UF 50V 20%
CE0013	C204	1	CAP, E 47UF 50V 20% 5MMLS
CE0101	C16,C19	2	CAP, E 4.7UF 50V 85D 5X11 5MML
CE0103	C102	1	CAP, E 100UF 35V 85DEG 5MMLS
CE0116	C5	1	CAP, E 2.2UF 50V BP 6X11 5MMLS
CF0008	C22	1	CAP, F 2200PF 100V 5% 5MMLS
CF0035	C8,C11,C12	3	CAP, F .022UF 100V 5% 5MMLS
CF0045	C6,C15,C17,C21	4	CAP, F .1UF 63DC 5% 5MMLS
CF0055	C9	1	CAP, F .22UF 63V 10% 5MMLS
CF0088	C13,C14	2	CAP, F .01UF 100V 5% 5MMLS
CF0099	C10,C20	2	CAP, F .68U 63V 5% 5MMLS
CF0134	C18	1	CAP, F 8200PF 100V 5% 5MMLS
CF0144	C4	1	CAP, F .082UF 63DC 5% 5MMLS
CF0150	C7	1	CAP, F .018UF 63V 5% 5MMLS
	Semiconductors		
UA0003	U5,U6	2	OPAMP, QUAD 14PIN DIL LM324N
UA0009	U1,U2	2	OPAMP, QUAD 14P DIL TL074/084
DZ0002	Z200	1	ZENER, 500mW 12V 5% 1N5242B
DZ0014	Z100	1	ZENER, 500MW 14V 5% 1N5244B
DS0001	D9, D100, D101, D102, D103, D104, D105, D200, D201	9	RECT, 100mA 75V SIGNAL 1N4148T
QM0035	Q1	1	JFET, N-CH J111 TO92 TR
	Resistors		
RC0001	R211	1	RES, CF 1K0 1/2W 5%
RC0290	R206	1	RES, CF 9M1 1/4W 5%
RM0002	R9,R10,R100,R101,R102,R208,R209	7	RES, MF 10K0 1/4W 1%
RM0003	R8,R200,R210	3	RES, MF 15K0 1/4W 1%
RM0011	R103,R105,R201	3	RES, MF 100K 1/4W 1%
RM0016	R19,R104	2	RES, MF 13K0 1/4W 1%
RM0024	R207	1	RES, MF 2K21 1/4W 1%
RM0031	R204	1	RES, MF 3K32 1/4W 1%
RM0033	R14	1	RES, MF 4K02 1/4W 1%
RM0035	R16,R28	2	RES, MF 4K75 1/4W 1%
RM0038	R11	1	RES, MF 56K2 1/4W 1%
RM0039	R5	1	RES, MF 5K11 1/4W 1%
RM0043	R15	1	RES, MF 6K81 1/4W 1%
RM0046	R7	1	RES, MF 82K5 1/4W 1%
RM0075	R205	1	RES, MF 475R 1/4W 1%
RM0079	R22	1	RES, MF 750R 1/4W 1%
RM0085	R107	1	RES, MF 2K00 1/4W 1%
RM0114	R23	1	RES, MF 22K1 1/4W 1%
RM0120	R6	1	RES, MF 30K1 1/4W 1%
RM0134	R12	1	RES, MF 121K 1/4W 1%
RM0136	R202	1	RES, MF 150K 1/4W 1%
RM0147	R20	1	RES, MF 16K2 1/4W 1%
RM0155	R13	1	RES, MF 2K87 1/4W 1%
RM0156	R108	1	RES, MF 392K 1/4W 1%
RM0170	R21	1	RES, MF 59K 1/4W 1%
RM0171	R203	1	RES, MF 475K 1/4W 1%
RM0182	R27	1	RES, MF 200K 1/4W 1%
RM0188	R106	1	RES, MF 499R 1/4W 1%
RM0258	R17	1	RES, MF 221K 1/4W 1%
RM0325	R1,R4	2	RES, MF 113K 1/4W 1%
RM0363	R18	1	RES, MF 24K3 1/4W 1%
RX0001	R2,R3	2	RES, MO 1K 1W 5%
	Miscellaneous		
JC0094	J1	1	CNCTR, 2PIN GOLD PC MT
JH0006	J4	1	CNCTR, HEADER 4PIN .100CTR
JH0074	J7	1	CNCTR, HEADER 8PIN LOCKING .1C
MM0025	J9	1	MISC, PC MT SCREW TERM 6-32

00297-2

Electrical Parts List (Cont.)

Part No.	Ref Designator	Qty	Description
MT0003	J3	1	TERM, FASTON MALE PCMT 250X032
MT0036	J2	1	TERM, FASTON MALE PCMT 205X032
SR0017	S2,S3	2	SWITCH, 2 POLE 2PDT
SR0040	S1	1	SWITCH, SLIDER DP3T PCB MOUNT
	300W Power Supply PCB MAIN		
	Capacitors		
CC0025	C2	1	CAP, CA 1000PF 100V 10%
CC0040	C11	1	CAP, CA 4700PF 100V 10%
CC0059	C3, C4	2	CAP, CA .1UF 100V 20%
CC0082	C5	1	CAP, CA .1UF 50V 20%
CC0130	C16	1	CAP, CY1 4700PF 250V 20% 10MML
CE0013	C12, C13	2	CAP, E 47UF 50V 20%
CE0098	C7	1	CAP, E 22UF 50V 20% 5X11 .2LS
CE0110	C6	1	CAP, E 1000UF 80V 18X40
CF0019	C8, C9	2	CAP, F 4700PF 100V 5% 5MMLS
CE0040	C23	1	CAP, E 680UF 200V 30X35 85DEG
CF0050	C18, C21, C22, C24, C25	5	CAP, F .1UF 250V 10%
CF0146	C10	1	CAP, F 6.8UF 250V 10% 27MMLS
	Semiconductors		
DS0001	D2, D10	2	RECT, 100mA 75V SIGNAL 1N4148T
DS0002	D5, D8, D9	3	RECT, 100MA 200V SIGNAL 1N3070
DD0003	D4	1	RECT, 1A2 60V DIAC
DR0076	D3	1	RECT, 16A 400V ULTRA MUR1640CT
DR0086	D6, D7	2	RECT, 1A 600V ULTRAFAST MUR160
DR0087	D1	1	RECT, 15A 200V ULTRA MUR1540
QM0004	Q4, Q5	2	MOSFET, IRF740 TO220AB
QM0020	Q1	1	MOSFET, IRF540 TO220AB
QB0002	Q2	1	TRANS, NPN 40V .6A TO92 2N4401
QB0014	Q6	1	TRANS, PNP TO92 MPSA92TR
QB0017	Q3	1	TRANS, NPN 150V 0.6A 2N5551
HC1011	U1	1	HYBRID, THK FILM HC BUCK CNTR
DZ0004	Z1	1	ZENER, 500mW 18V 5% 1N5248B
DZ0021	Z2, Z3, Z4, Z5	4	ZENER, 500MW 15V 5% 1N5245B
	Resistors		
RM0001	R23	1	RES, MF 1K00 1/4W 1%
RM0002	R8	1	RES, MF 10K0 1/4W 1%
RM0035	R11	1	RES, MF 4K75 1/4W 1%
RM0039	R6	1	RES, MF 5K11 1/4W 1%
RM0070	R12	1	RES, MF 301R 1/4W 1%
RM0075	R15, R16, R18, R19	4	RES, MF 475R 1/4W 1%
RM0111	R7	1	RES, MF 17K8 1/4W 1%
RM0123	R5	1	RES, MF 36K5 1/4W 1%
RM0198	R24	1	RES, MF 205K 1/4W 1%
RM0260	R10	1	RES, MF 1M0 1/4W 1%
RM0339	R3, R13, R25, R34	4	RES, MF 10R 0.6W 1% FLAMEPROOF
RM0340	R17, R20	2	RES, MF 22R 1/4W 1% FLAMEPROOF
KS0020	R26	1	SURGISTOR, 10R 2A CL-110
RC0082	R22	1	RES, CF 100K 1/2W 5%
RC0128	R35	1	RES, CF 33K 1/4W 5%
RC0136	R30	1	RES, CF 160K 1/4W 5%
RC0273	R31, R32	2	RES, ZERO OHM 1/4W
RW0022	R1, R2	2	RES, WW 0R1 2W 5%
RX0072	R4	1	RES, MO 100R 1W 5

00297-3

Electrical Parts List (Cont.)

Part No.	Ref Designator	Qty	Description
	Miscellaneous		
500104	T1	1	XFMR, POWER 100V HC TRAN ETD39
810056	Clip	3	MET, HTSNK CLIP .9X.5X.2 FET
810066	Clip	2	MET, HTSNK CLIP HPS SERIES
810091	Heatsink	1	MET, HTSNK SEC 3FET RP5
810092	Heatsink	1	MET, HTSNK PRI 2FET RP5
JH0074	J6	1	CNCTR, HEADER 8PIN LOCKING .1C
MT0023	J1, J2, J4, J5	4	TERM, FASTON MALE PCMT 187X032
MM0025	J7, J8, J9, J10	4	MISC, PC MT SCREW TERM 6-32
540131	L1	1	IND, 25UH UPRIGHT AIR COIL
BF0007	L2	1	BEAD, FERRITE
HS0065	Screw	4	SCREW, #6-32X1/4 PAN PHIL BLK
MS0005	Silpad	1	SILPAD, .009" .3C/W TO3P
HS0062	Screw	3	SCREW, #6 SELF TAP PAN PHIL BL
	PCB, EMI FILTER		
	Capacitor		
CF0057	C1,C2	2	CAP, FX .22UF 250V 10%
DB0009	D5	1	RECT, 6A 400V BRIDGE
RC0004	R23	1	RES, CF 1M0 1/4W 5%
	MISCELLANEOUS		
MT0005		4	TERM, KWIKDISC .187 X.032 FEMA
480108		3	SUB, #18B 2" 1/4" STRIP BOTH
810056		4	MET, HTSNK CLIP .9X.5X.2 FET 1PER USED ON IEC-N TO FUSE; 1PER USED ON FUSE TO SWITCH; 1PER USED ON IEC-L TO SWITCH
FH0012		1	FUSE, HOLDER PANEL MT SEALED
FS0022		1	FUSE, 3A 250V 1.25X.25 GLASS
HS0004		5	SCREW, #6-32X1/4 PAN PHIL ZNP 4PER USED ON MM0025 ON 600078 BOARD; 1PER USED ON MM0025 ON FEATURE BOARD;
HS0005		1	SCREW, #6-32X1/4 100 PHIL ZNP USED WITH MZ0003;
HS0006		2	SCREW, #6-32X3/8 100 PHIL ZNP USED ON MM0025 ON LINEAR BOARD;
HS0009		4	SCREW, #6-32X1/2 100 PHIL BLK USED ON LINEAR FETS;
HS0072		2	SCREW, #4-24X3/8 HL PP ZNC USED ON J1;
HS0076		7	SCREW, #6-3/8 TYPE AB 100D ZNP USED WITH MZ0030;
JC0071		1	CNCTR, FEM-FEM HARNESS 8PIN 9" USED ON THE LINEAR TO MAIN;
JC0111		1	CNCTR, 8PIN RIBBON CABLE 3" USED ON THE FEATURE LINEAR;
JC0129		1	CNCTR, AC IEC SOCKET .250 2PIN ON THE FRONT PANEL
JC0169B		1	CNCTR, FEM-FEM HARNESS 4PS 10" USED ON J4

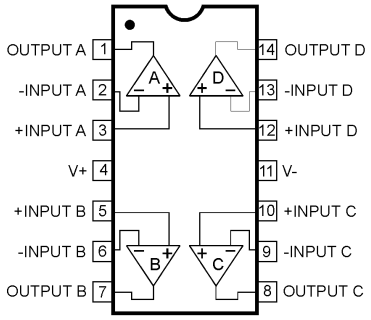
00297-4

Part No.	Ref Designator	Qty	Description
JC0169D		1	CNCTR, FEM-MA HARNESS 4PSH 10" USED WITH JC0169B
JC0174A		1	CNCTR, XOVER WIRE 3.5M A USED ON J2 AND J3 ON FEATURE BOARD;
JC0174B		1	CNCTR, XOVER WIRE 3.5M B USED ON JC0174A;
JC0175		1	CNCTR, SPEAKER WIRE 3.5M USED ON J1 AND J2 ON LINEAR BOARD;
MS0005		7	SILPAD, .009" .3C/W TO3P 3PER USED ON MAIN BOARD; 4PER USED ON THE LINEAR BOARD;
MZ0003		1	STANDOFF, 6-32 3/8 ROUND AL USED ON THE MAIN BOARD;
MZ0031		7	STANDOFF, 3/8" NYLON LOCKING 4PC USED ON 600078 BOARD; 3PC USED ON 620008 BOARD
SR0006	S2,S3	2	SWITCH, CAP FOR SR0005
SR0032		1	SWITCH, FRONT PANEL ROCKER TV5
KV0001	Z4	1	VARISTOR, 275V 100J .6W
	PCB, VOLUME-LED		
	Resistors		
RP0097	R1	1	POT, A10K SINGLE/BRKT D SHAFT
	Miscellaneous		
DL0014	D1	1	LED, 3MM BICOLOR RED/GR
JH0006	J5	1	CNCTR, HEADER 4PIN .100CTR
HS0078		4	SCREW, #4-24X1/2 HL PP BLK USED ON VOLUME CUP
JC0169A		1	CNCTR, FEM-MA HARNESS 4PSH 15" USED ON LOCATION J5
RP0102		1	POT, KNOB INT 3.5M LEVEL

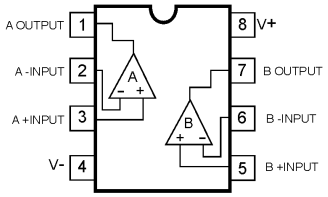
00297-5

Integrated Circuit Diagrams

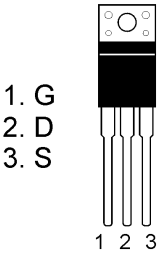
OPAMP,QUAD 14P DIL TL074/084,LM324N
U1,U2,U5,U6,U10,U18



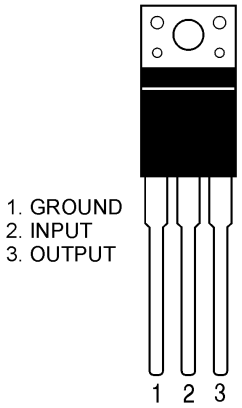
OPAMP, DUAL 8PIN DIL TL082
U101



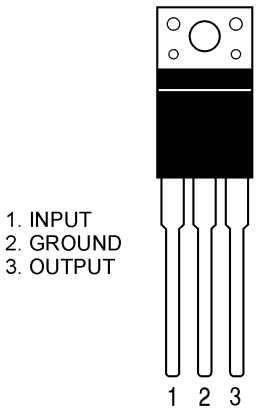
MOSFET, IRF530/ 540/740/9540
Q1, Q3, Q4, Q5, Q7, Q8



-15V TO220 LM7915CT
REGULATOR
U3



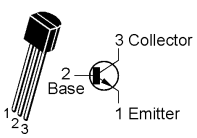
+15V TO220 LM7815CT
REGULATOR
U2



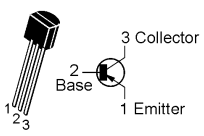
JFET, Q1,Q9

1. DRAIN
2. SOURCE
3. GATE

TRANS, NPN 150V 0.6A 2N5551, 2N4401,
Q2,Q3,

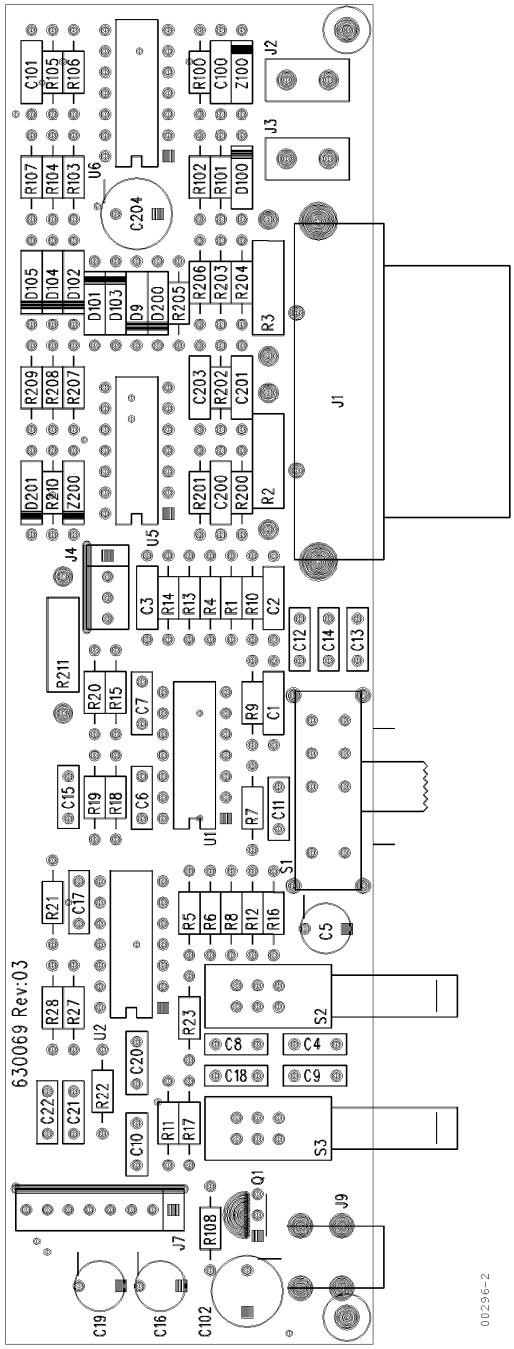


TRANS, PNP 150V 0.6A 2N5401,MPSA92,
Q1,Q5,Q6

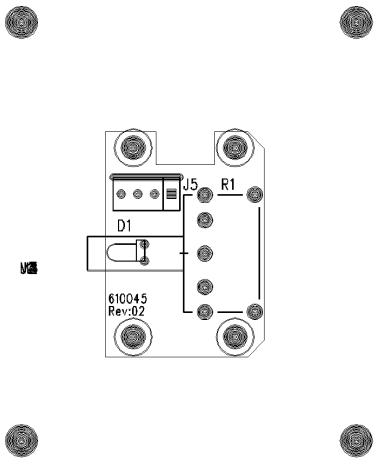


00306

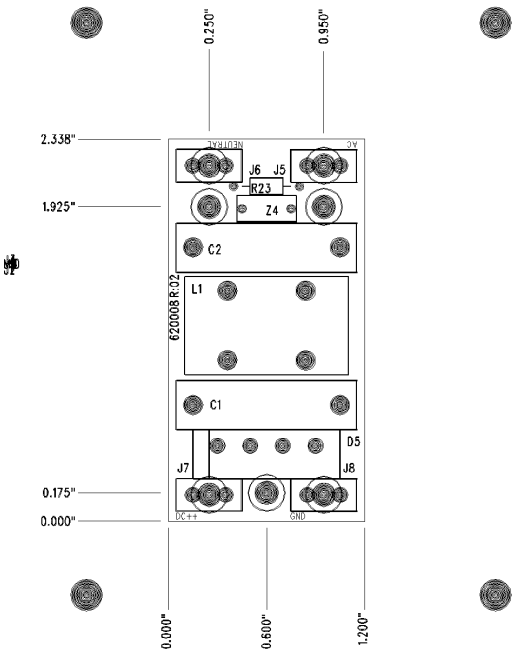
Printed Circuit Board Diagrams



Printed Circuit Board Diagrams (Cont.)



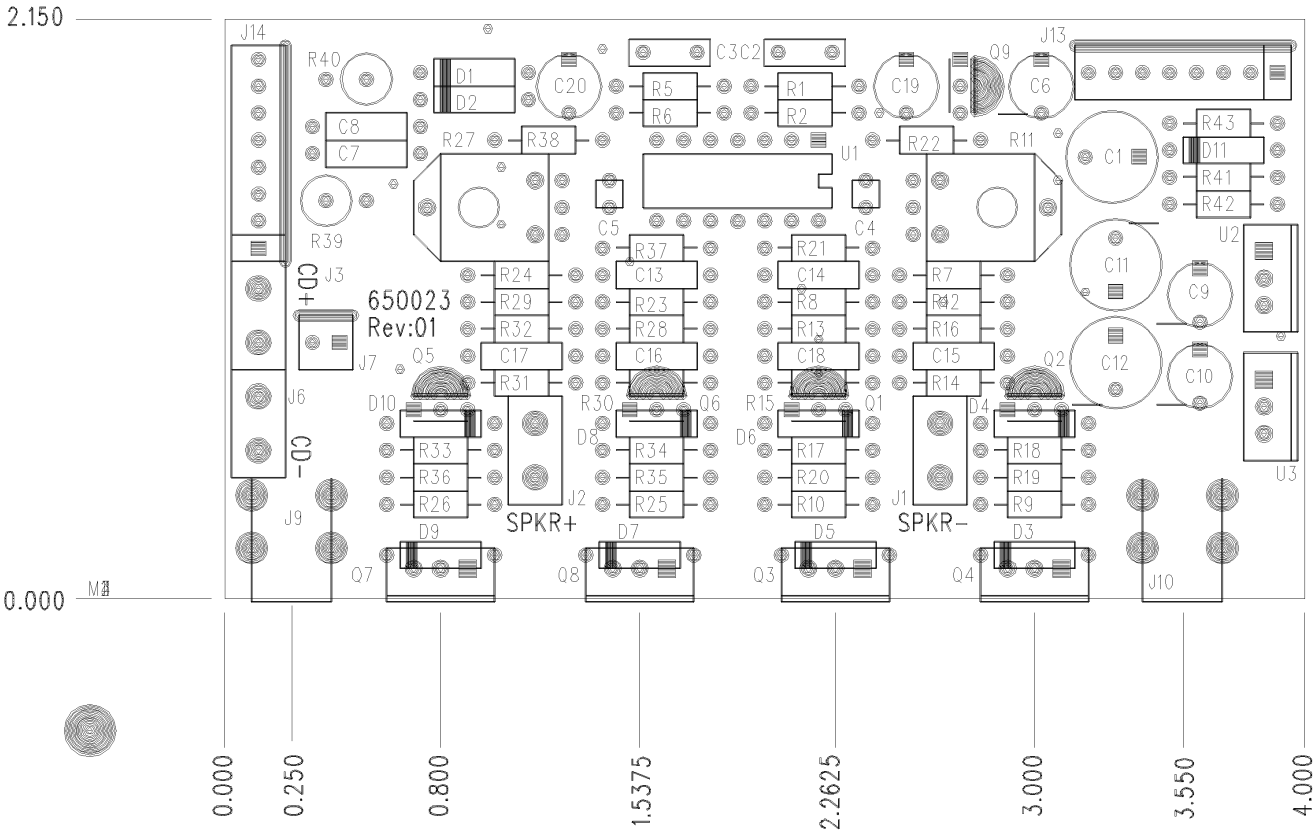
VOLUME-LED BOARD		
part number:	Revision:	Date:
610045	2	04AUG00



HC BASH 300W EMI BOARD		
part number:	Revision:	Date:
620008	2	30JUN00

00296-3

Printed Circuit Board Diagrams (Cont.)

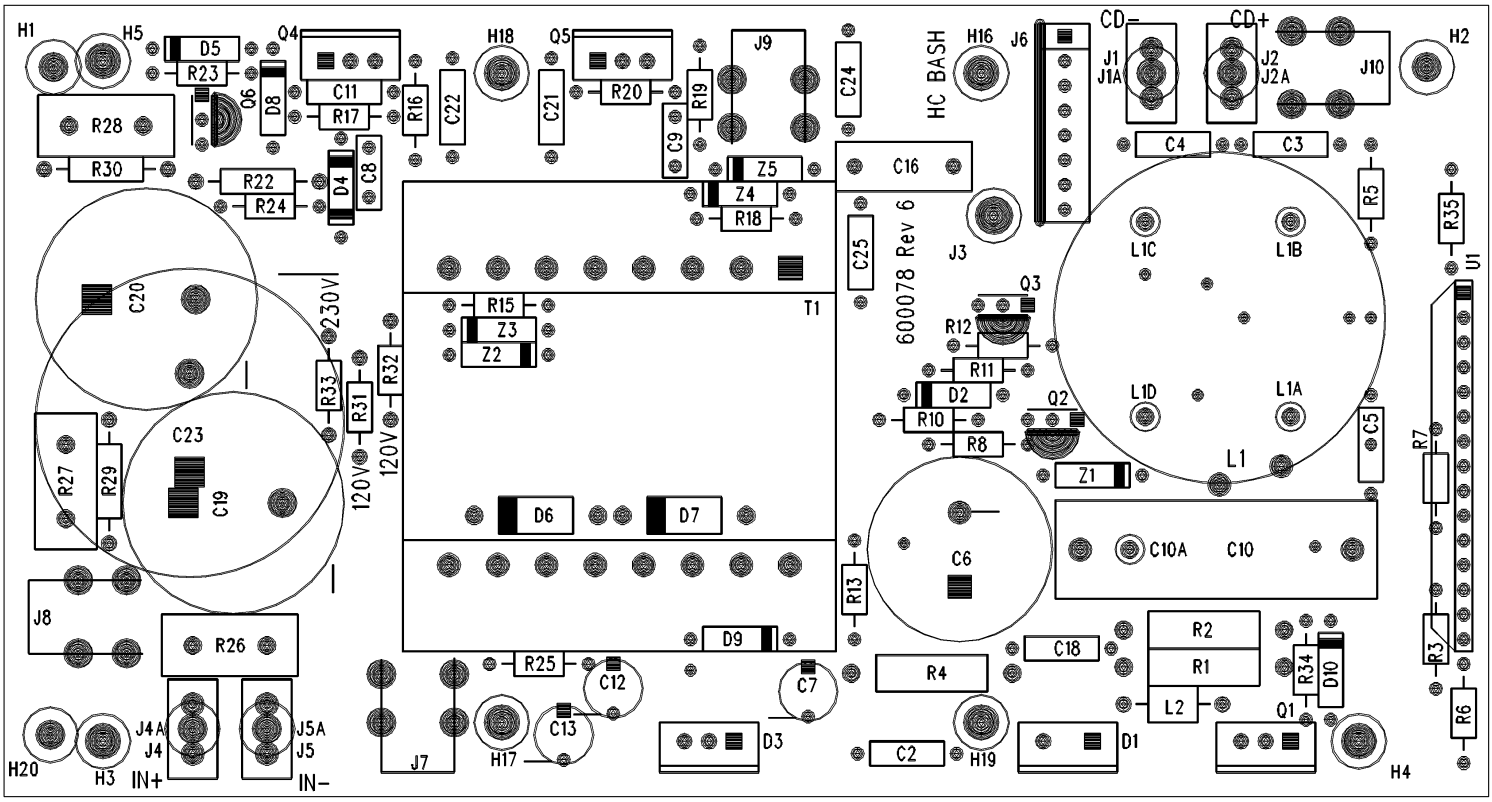


HC BASH 300W Linear Board		
part number:	Revision:	Date:
650023	1	30JUN00

00296-4

Printed Circuit Board Diagrams (Cont.)

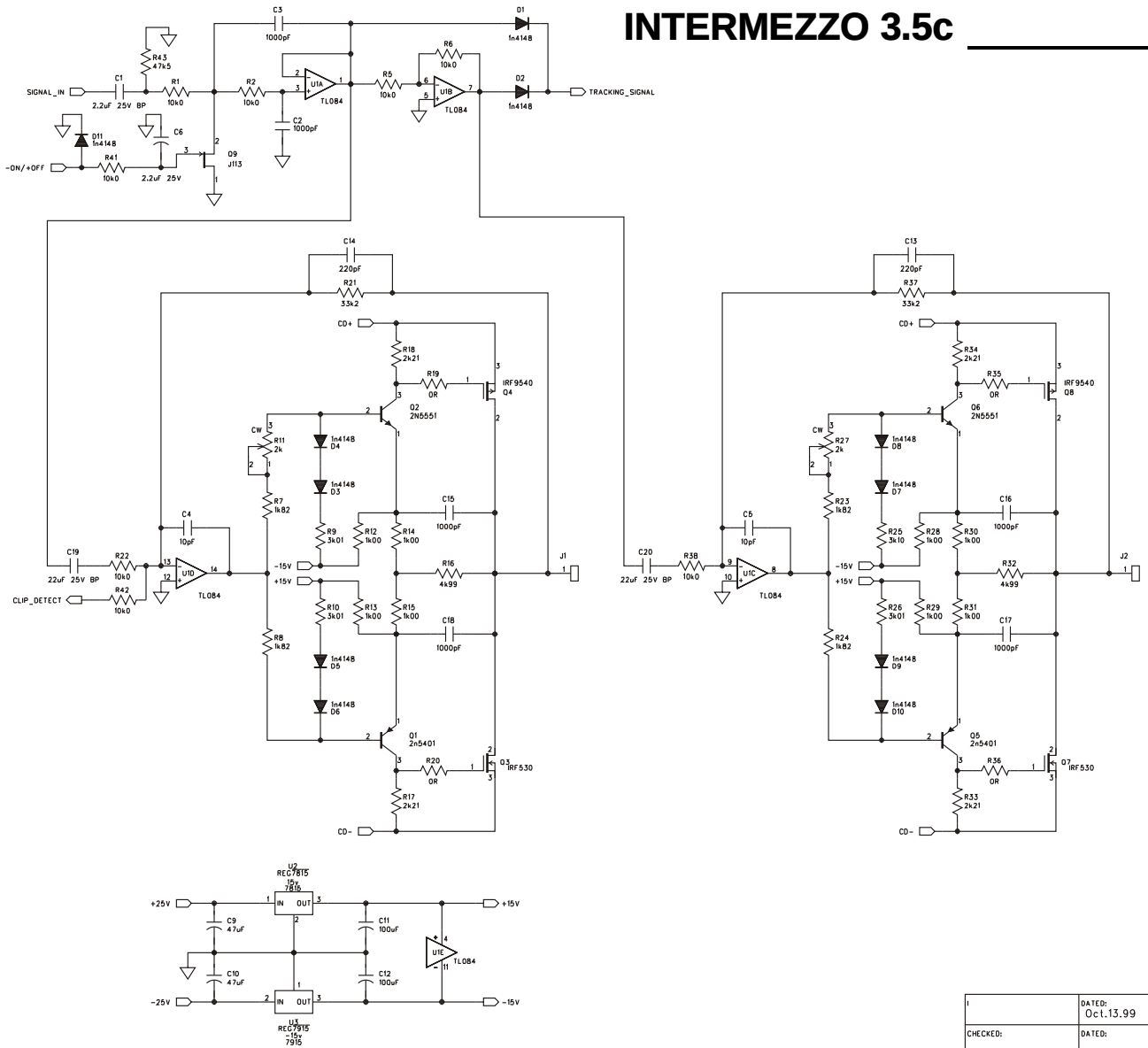
SILK SCREEN



HC BASH 300W Power Supply		
part number:	Revision:	Date:
600078	6	28JUN00

00296-6

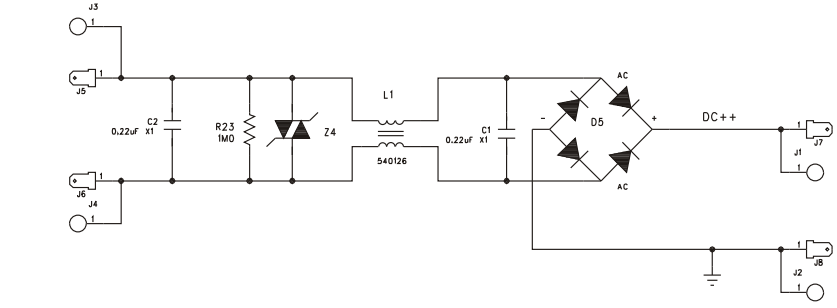
INTERMEZZO 3.5c

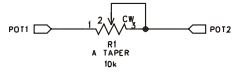


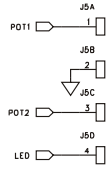
	DATED: Oct.13.99	TITLE: Linear PCB Intermezzo 2.6B & 3.5C
CHECKED:	DATED:	CODE: / SIZE: / DRAWING NO: SH001906 / REV: 06
QUALITY CONTROL:	DATED:	
RELEASED:	DATED:	SCALE:

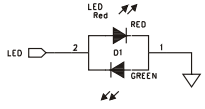
INTERMEZZO 3.5c

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:







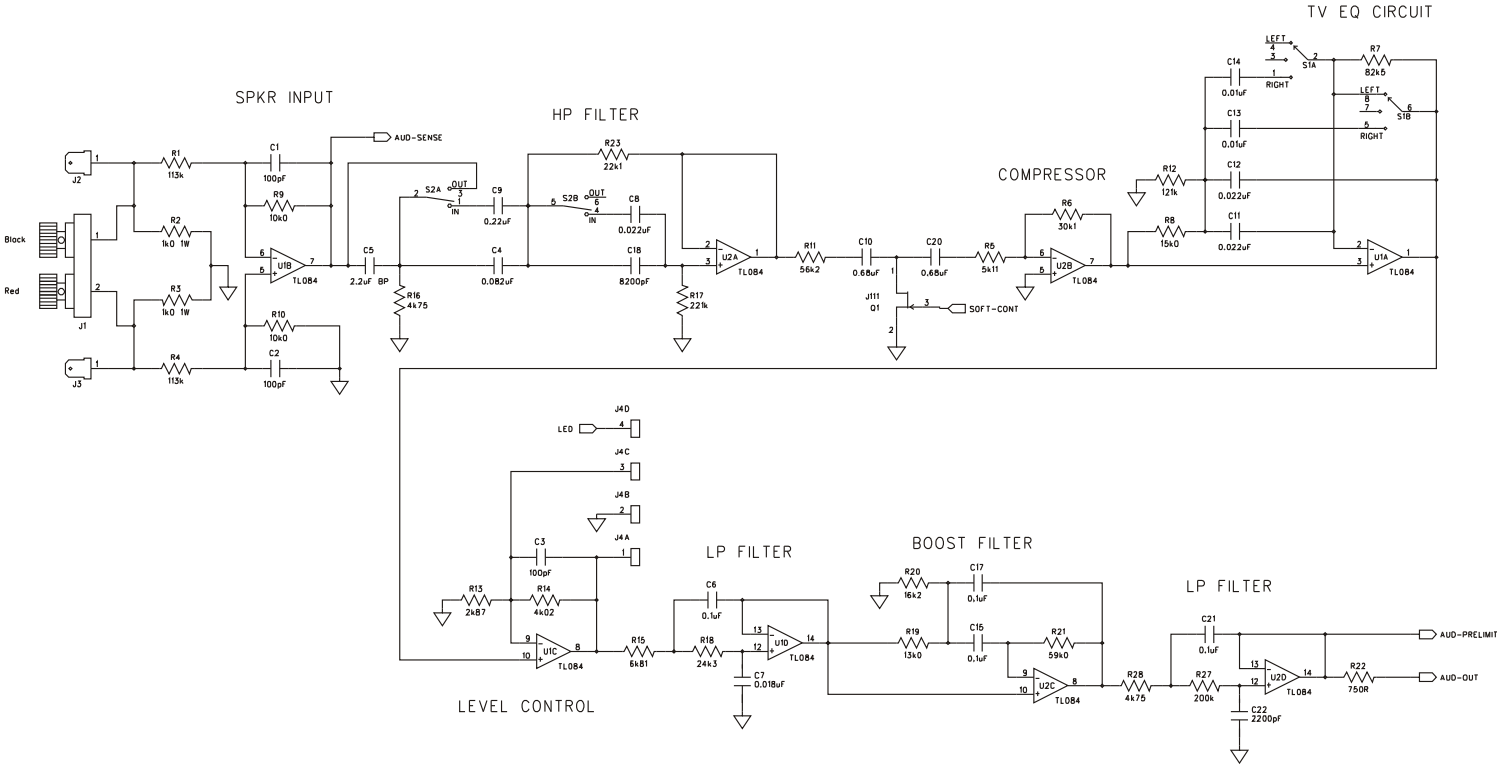


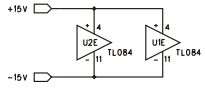
	DATED: Oct.13.99	TITLE: 250W AC-DC and EMI Board			
		Volume - LED PCB			
CHECKED:	DATED:	PCB: 620008 Rev 2	SIZE:	DRAWING NO: SH001802	REV: 02
QUALITY CONTROL:	DATED:				
RELEASED:	DATED:	SCALE:			

INTERMEZZO 3.5c

Infinity

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

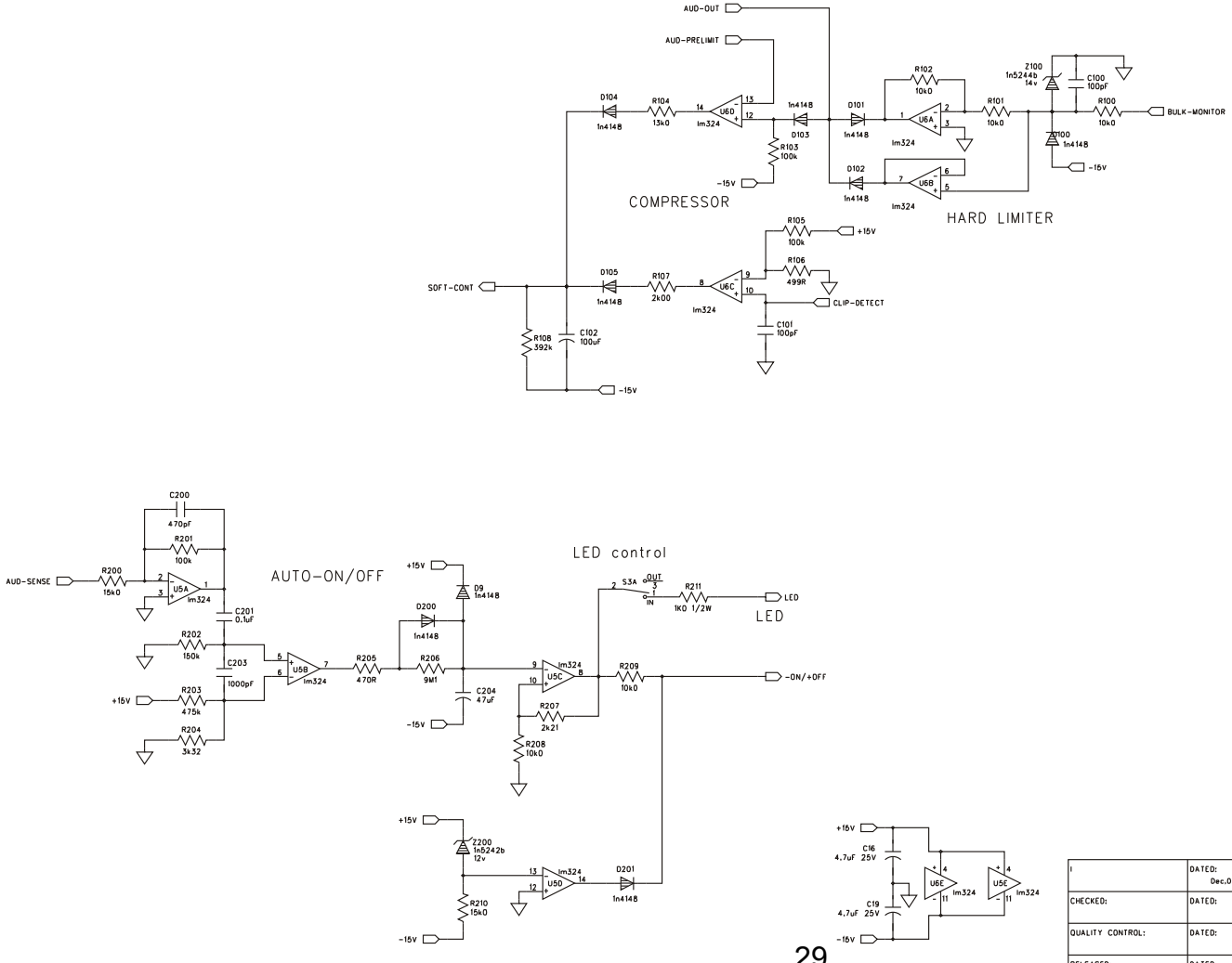




I	DATED: Dec.06.99	TITLE: Feature Main Intermezzo Center Channel
CHECKED:	DATED:	CODE: / SIZE: / DRAWING NO: SH001605 / REV: 05
QUALITY CONTROL:	DATED:	
RELEASED:	DATED:	SCALE:

INTERMEZZO 3.5c

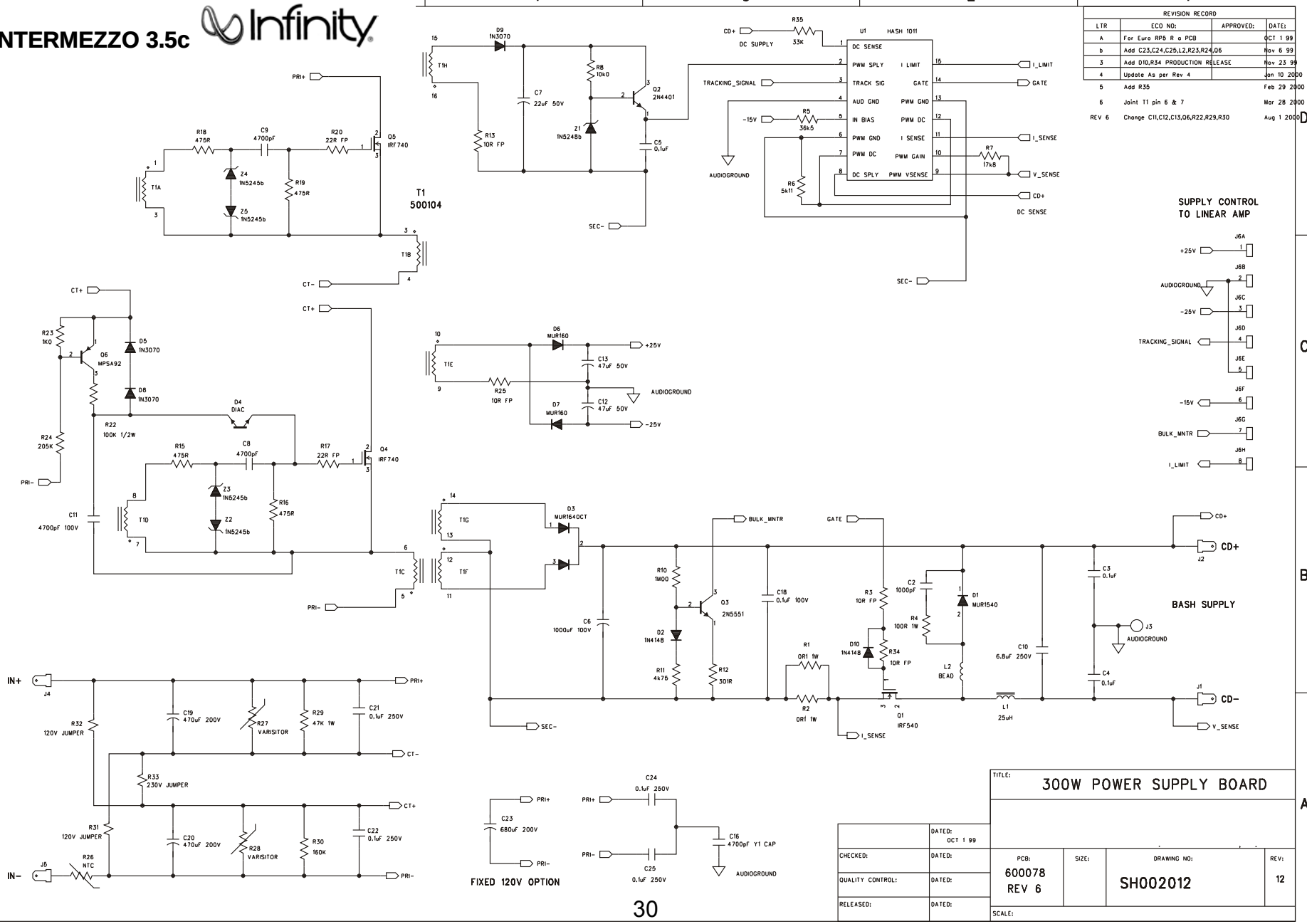
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



	DATED: Dec.06.99	TITLE: Feature Housekeeping Intermezzo Center Channel			
CHECKED:	DATED:	CODE:	SIZE:	DRAWING NO: SH001605	REV: 04
QUALITY CONTROL:	DATED:				
RELEASED:	DATED:	SCALE:			

INTERMEZZO 3.5c Infinity

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:
A	For Euro RP5 R a PCB		OCT 1 99
b	Add C23,C24,C25,L2,R23,R24,Q6		Nov 6 99
3	Add D10,R34 PRODUCTION RELEASE		Nov 23 99
4	Update As per Rev 4		Jan 10 2000
5	Add R35		Feb 29 2000
6	Joint T1 pin 6 & 7		Mar 28 2000
REV 6	Change C11,C12,C13,Q6,R22,R29,R30		Aug 1 2000



	DATED: OCT 1 99	TITLE: 300W POWER SUPPLY BOARD		
CHECKED:	DATED:	PCB: 600078 REV 6	SIZE:	DRAWING NO: SH002012 REV: 12
QUALITY CONTROL:	DATED:			
RELEASED:	DATED:	SCALE:		